

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A semiconductor device comprising:
~~a high-breakdown-voltage regulator configured to operate at a high input voltage, said regulator comprising resistors connected in series to divide a voltage output from a transistor connected to a power supply line, said transistor having a gate connected to a differential amplifier circuit receiving a first input from a first reference voltage generating circuit and a second input as a feedback voltage divided by said resistors;~~
~~a second reference voltage generating circuit structured as a low-breakdown-voltage component and configured to receive an output voltage from the high-breakdown-voltage regulator to generate a reference voltage;~~
~~a differential amplifier circuit structured as another low-breakdown-voltage component and configured to receive the output voltage from the high-breakdown-voltage regulator and the reference voltage from the reference voltage generating circuit to produce a drive voltage;~~
~~an output driver structured as a high-breakdown-voltage component and configured to operate based on the drive voltage, wherein the output driver is a MOS transistor;~~
~~a diode inserted between a gate and a source of the MOS transistor, the diode having a reverse breakdown voltage lower than an oxide breakdown voltage of the MOS transistor;~~
~~a constant current inverter inserted between a power supply line and the output driver; and~~
~~resistors connected in series to the output driver to divide an output voltage of the output driver and feed the divided voltage back to the differential amplifier circuit.~~
2. (Original) The semiconductor device of claim 1, wherein the high-breakdown-voltage output driver and the low-breakdown-voltage components are MOS transistors with gate oxide films having a first thickness.
3. (Currently Amended) The semiconductor device of claim 2, wherein the high-breakdown-voltage regulator is structured by comprises a high-breakdown-voltage MOS transistor with a gate oxide film having a second thickness greater than the first thickness.

4. (Currently Amended) The semiconductor device of claim 1, wherein the output driver is a P-channel MOS transistor, the semiconductor device further comprising a diode inserted between the gate and the source of the P-channel MOS transistor [[has]] having a reverse breakdown voltage lower than an oxide breakdown voltage of the P-channel MOS transistor.
5. (Currently Amended) The semiconductor device of claim 1, wherein the output driver is an N-channel MOS transistor, the semiconductor device further comprising a diode [[is]] inserted between the gate and the source of the N-channel MOS transistor or between the gate and the ground and [[has]] having a reverse breakdown voltage lower than an oxide breakdown voltage of the N-channel MOS transistor.
6. (Currently Amended) The semiconductor device of claim 1, wherein the output driver is a P-channel MOS transistor, the semiconductor device further comprising a constant current inverter inserted between the differential amplifier circuit and the output driver, the constant current inverter comprising:
 - a constant current circuit connected between a power supply line and the output driver; and a MOS transistor controlled by the drive voltage output from the differential amplifier circuit.
7. (Currently Amended) The semiconductor device of claim 1, wherein the output driver is a P-channel MOS transistor, the semiconductor device further comprising a constant current inverter inserted between a power supply line and the output driver, the constant current inverter comprising:
 - a first N-channel MOS transistor to which the reference voltage generated by the reference voltage generator is supplied;
 - a first P-channel MOS transistor connected in series to the first N-channel MOS transistor to produce a constant current;
 - a second P-channel MOS transistor defining a constant current circuit under a current mirror configuration; and

a second N-channel MOS transistor to which the drive voltage output from the differential amplifier circuit is supplied.

8. (Currently Amended) A semiconductor device comprising:

a reference voltage generating circuit configured to generate a reference voltage, said circuit comprising resistors connected in series to divide a voltage output from a transistor connected to a power supply line, said transistor having a gate connected to a differential amplifier circuit receiving a first input from a reference voltage generating circuit and a second input as a feedback voltage divided by said resistors;

a differential amplifier circuit configured to receive the reference voltage and generate a drive voltage;

an output driver configured to operate based on the drive voltage, wherein the output driver is a MOS transistor;

~~a diode inserted between~~ a gate and a source of the MOS transistor, the diode having a reverse breakdown voltage lower than an oxide breakdown voltage of the MOS transistor;

resistors connected in series to the output driver to divide an output voltage of the output driver and feed the divided voltage back to the differential amplifier circuit; and

a constant current circuit inserted between a power supply-line and a combination of the reference voltage generating circuit and the differential amplifier circuit.

9. (Original) The semiconductor device of claim 8, wherein the constant current circuit is structured by a depression-mode N-channel or P-channel MOS transistor.

10. (Original) The semiconductor device of claim 8, wherein the constant current circuit is structured by an enhancement-mode N-channel or P-channel MOS transistor.

11. (Currently Amended) The semiconductor device of claim 8, wherein the constant current circuit ~~is structure by~~ includes multiple MOS transistors connected in series to form a multi-stage constant current circuit.